

Patent claims

1. Process for preparing trichlorosilane by reacting silicon with silicon tetrachloride, hydrogen and optionally hydrogen chloride using catalysts, characterized in that silicon is intensively mixed with the catalyst before the reaction.
2. Process according to Claim 1, characterized in that the mixing of the silicon with the catalyst takes place in a mixer with rotating mixing tools.
3. Process according to Claim 1 or 2, characterized in that the mixing time is 1 to 60 minutes, preferably 5 to 20 minutes.
4. Process according to Claims 1 to 3, characterized in that the catalyst used is a copper catalyst or an iron catalyst.
5. Process according to Claim 4, characterized in that the catalyst used is a copper oxide catalyst or an iron oxide catalyst.
6. Process according to Claims 1 to 5, characterized in that the mixing of silicon and catalyst takes place at a temperature of from 100 to 400°C, preferably at 130 to 350°C.
7. Process according to Claims 1 to 6, characterized in that the mixing of silicon and catalyst takes place in the presence of hydrogen.
8. Process according to at least one of Claims 1 to 7, characterized in that the reaction is carried out at a pressure of from 1 to 40 bar (absolute).
9. Process according to at least one of Claims 1 to 8, characterized in that the reaction is carried out at temperatures of from 400 to 800°C.

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10. Process for preparing silane and/or ultrapure silicon, characterized in that the starting material is trichlorosilane obtained according to at least one of Claims 1 to 9.
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